

W5YI

Nation's Oldest Ham Radio Newsletter **REPORT**

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FCC Provides for Electronic Filing of Form 610 Applications

The FCC released a seven page Order on October 24th entitled "Amendment of the Amateur Service Rules to Change Procedures for Filing an Amateur Service License Application and to Make Other Procedural Changes."

The major objective of the proceeding is to facilitate amateur licensee data entry and license grant by electronic means ...and to provide for a sixth amateur service license class.

Previously, a person who qualified for the Technician Class was granted additional Novice privileges below 30 MHz by the CSCE which indicated the examinee has passed a telephony examination. "Technician Plus" will now be considered a separate license class.

The FCC said that "Notice and Comment" was not necessary since the new rules were not substantive. Here is the text of the Order. We are including the footnotes in the text of the Order in [square brackets]:

1. This Order amends the amateur service rules to provide an electronic filing capability to the volunteer-examiner coordinators (VECs) to clarify that amateur station and operator licenses are authorized as soon as the license data is entered into the Commission's license data base, and to reflect other nonsubstantive procedural changes.

[There are eighteen VECs that coordinate the work of some 30,000 volunteer examiners (VEs) who

prepare and administer examinations for new and upgraded amateur operator licenses. As part of this process, the VECs receive and screen the application forms from the VEs and forward them to the Commission. One of the VECs is prepared to submit the data on a computer diskette. The remainder want to use the telephone lines for this purpose.]

2. Electronically-filed license applications. Successful license examinees want their licenses granted as soon as possible so that they can operate their amateur stations. Recent modernization of the Commission's data processing capabilities makes it possible to greatly reduce the time it takes for use to grant licenses in the amateur service.

By accepting from the VEC's electronically filed data from applications for new and upgraded amateur operator licenses, the time and effort required for the VECs to send and for the Commission to receive, application documents by mail would be eliminated.

[Under Sections 3 and 4 of *Instructions For Volunteer Examiner Coordinators*, the VECs retain examination session records for fifteen months. Except for a brief period at the start of electronic filing during which the VECs will also submit the paper forms for verification of the data that is filed electronically, the VEC will retain the paper forms and make them available to the Commission upon request.]

All of the VECs have notified us that they want

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to begin electronic filing of license application data as soon as possible.

As part of their routine operations, they enter the data from the application documents they receive into an electronic form that can be sent at high speed over telephone lines to our license processing facility. This data can be used as received so that our license processors could discontinue manually reentering the data into the processing system.

We have been making arrangements with the VECs, therefore, to enable them to use electronic filing procedures similar to those that have been implemented for certain private and mobile radio services. The application form, moreover, has been revised to accommodate electronic filing.

We are, accordingly, amending Section 97.519 to enable a VEC to forward electronically the data from the application document for the examination sessions it coordinates. [Paper applications from licensees that are filed directly with the Commission, such as a license renewal and modification, will continue to be sent by mail until such time as electronic filing can be extended to those transactions.] VECs may also continue to send by mail to our license processing facility the application documents.

3. License Grant. The decision to grant a license occurs when our license processing facility enters the data into the amateur service licensee data base.

[This data base resides in a magnetic storage media. It contains information such as the licensee's name, address, class of operator license and station call sign. The information is used for regulatory functions such as verifying that a transmitting station has a license grant and for contacting the licensee quickly in case the station is causing interference.]

Currently, however, the new licensee must delay beginning operation until a license document can be printed, mailed and delivered. [See Section 97.7 of the Commission's Rules]

This procedure can result in several weeks delay during which the licensee cannot operate an amateur station. Fortunately, information technology is making our amateur service licensee data base more widely available, thus eliminating the need for an amateur operator to hold a license document before exercising the privileges authorized by the grant of the license.

[The amateur service licensee data base is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. (703) 487-4600 or 1-800-553-NTIS. It is also distributed by a number of suppliers in the private sector. The amateur service community makes the data base widely available through their electronic bulletin boards and packet radio systems. We intend, in the future, to make the current licensee data base publicly available through an accessible on-line, read-only electronic system.]

We are amending the rules, therefore to authorize operation on the basis of the license data appearing in

the amateur service licensee data base.

[See Section 97.9(a) of the Commission's Rules. Requiring a license document to be in the personal possession of an amateur service licensee is not as necessary as in the past because we generally rely upon the licensee data base to confirm that the licensee is authorized to operate a station in the amateur service.]

4. Procedural changes. Beginning in 1995 [The beginning date will be announced by public notice] our new system will give our license processing facility the capability to make a timely mailing to a licensee's address of record a renewal short form [FCC Form 610-R] filled in and ready for signature. We are amending our rules, therefore, to allow this form to be so used.

Because we cannot be certain of delivery of the form to every licensee in every instance, however, we will also continue to allow the longer forms [FCC Form 610 is for use by persons. FCC Form 610-B is used by club, military recreation, and RACES stations] to be used for renewing licenses.

We are also combining into Section 97.509 all of the administering volunteer examiner (VE) requirements that are presently stated in four separate rule sections [See Sections 97.509, 97.511, 97.515 and 97.517 of the Commission's Rules] and adding new Section 97.511 *Examinee conduct* to emphasize that an examinee must comply with the instructions given by the administering VEs.

Further, we are amending Section 97.9 to treat Technician Plus as a license class. *Technician Plus* means that a Technician Class licensee has also passed a telegraphy examination. We believe that showing this information in our license data base and license document as a separate class rather than continue to treat it as a category of the Technician Class is consistent with current licensing procedures.

5. We firmly believe in the principle that government should be responsive to user needs.

[Vice President Al Gore, Report of the National Performance Review, *From Red Tape to Results: Creating a Government That Works Better and Costs Less*. The Vice President's Report stresses putting people first. Serving customers and cutting costs are two of its key principles. The Order embraces these principles by revising rules to speed the authorization of amateur service operation, and reducing the cost to the tax-payers of processing the licenses.]

The rules that we are amending will enable us to use procedures that are responsive to requests from VEs, VECs and applicants that the Commission reduce the time it takes to authorize new amateur service licensees to operate their stations. When these procedures are fully implemented, such authorizations will be made very quickly. These amendments have

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been made possible through modernization of the Commission's and the VECs data processing capabilities.

6. Because the rule amendments adopted herein are nonsubstantive in nature, the notice and comment provisions of Section 553 of the Administrative Procedure Act need not be complied with.

Accordingly, IT IS ORDERED that effective December 20, 1994, Part 97 of the Commission's Rules IS AMENDED as set forth below. The Order is signed by Ralph A. Haller, Chief, Private Radio Bureau.

§ 97.5 Station license required

Section 97.5 is amended by revising the entire text. Current Section 97.5 rules require applicants to "...hold an FCC-issued written authorization." New 97.5 does NOT contain the words "written authorization" ...instead the rules refer to station license grants.

§ 97.7 Control operator required

Current Section 97.7 says "only a person holding one of the following documents may be the control operator of a station." New Section 97.7: "The control operator must be a person who has been granted an amateur operator/primary station license or who holds an unexpired document..."

§ 97.9 Operator license

Current Section 97.9 refers to five classes. New 97.9 adds a sixth class: "Technician Plus." New Section 97.9(b) changes "holding a ...license" to "granted an operator license."

§ 97.17 Application for new license or reciprocal permit for alien amateur license

The reference in current Section 97.17(f) to "The FCC will not grant any request for a specific call sign." was deleted in anticipation of the "vanity" call sign system.

§ 97.21 Application for a modified or renewed license

(Previously § 97.19) This section provides for the use of a new renewal short Form 610-R. Here is the wording:

(a) A person who has been granted an amateur station license that has not expired

(3) May apply for a renewal of the license for another term. (The FCC may mail to the licensee a FCC Form 610-R that may be used for this purpose.) The application may be made on the FCC Form 610-R if it is received from the FCC. If the Form 610-R is not received from the FCC at least 30 days before the expiration of the license for an operation/primary station license, the application may be made on FCC Form 610.

(c) Each application for a modified or renewed amateur service license must be accompanied by a photocopy (or the original) of the license document unless an application for renewal using FCC Form 610-R is being made, or unless the original document has been lost, mutilated, or destroyed.

§ 97.23 Mailing address. (Previously § 97.21)

New added wording provides for the "Revocation of the

station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the person failed to provide the correct mailing address."

§ 97.25 License term. (Previously § 97.23)

Wording changes "An amateur service license is normally issued for a 10-year term." to "An amateur service license is normally granted for a 10-year term."

§ 97.27 FCC modification of station license (Previously § 97.25) No change except §97.25 is renumbered to §97.27.

§ 97.29 Replacement license document. (Previously just "Replacement license.") New wording provides persons who have been "granted an amateur station license" whose original license is lost, mutilated or destroyed must request a replacement."

§ 97.301 Authorized frequency bands

New wording changes "holding an operator license" to "granted an operator license." Also frequency privileges for the "Technician Plus" class are added to §97.301(e.)

§ 97.501 Qualifying for an amateur operator license

Wording changed from "An applicant must pass an examination for the issuance of a new amateur operator license..." to "Each applicant for the grant of a new amateur operator license..." §97.501(d) adds the examination requirements for the Technician Plus Class license.

§ 97.505 Element credit

Now provides Element 1(A), 2 and 3(A) examination credit for the Technician Plus Class operator license.

§ 97.507 Preparing an examination

Now provides that Technician Plus Class operators may prepare Element 2 (Novice) examinations.

§ 97.509 Administering VE requirements

Adds the Technician Plus Class to list of classes that may administer Novice and Technician Class examinations. Also incorporated are previous Sections 97.511, 97.515 and 97.517 which are now deleted and reserved.

§ 97.511 Examinee conduct. (Previously "Amateur operator license examination.") Specifies that "Each examinee must comply with instructions given by the administering VEs."

§ 97.519 Coordinating examination sessions

Current Section 97.519(b) reads "The coordinating VEC must screen and forward all applications for qualified examinees within 10 days...etc." New 97.519(b) "At the completion of each examination session, the coordinating VEC must collect the FCC Forms 610 documents and test results from the administering VEs. Within 10 days of collecting the FCC Forms 610 documents, the coordinating VEC must screen and, for qualified examinees, forward electronically or on diskette the data contained on the FCC Forms 610 documents, or forward the FCC Form 610 documents to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245. When the data is forwarded electronically, the coordinating VEC must retain the FCC Forms 610 documents for at least 15 months and make them available to the FCC upon request."

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FCC DISMISSES FOREIGN TEMPORARY LICENSING

"We believe that it is in the public interest to provide a procedure that allows temporary visiting foreign amateur operators to operate their stations while in the United States. This will particularly benefit tourists who come to the United States on relatively short notice. Additionally we believe that the proposed procedure will enhance international good will. Further, the proposal, ...would result in no cost to the Commission. The system would be administered and coordinated by the VEs and VECs who can be reimbursed for their out-of-pocket expenses."

(Aug. 6, 1992 - Notice of Proposed Rulemaking, PR Docket 97-167.)

"In light of concerns expressed by the commenters, we have decided not to amend the amateur service rules as proposed. We recognized, however, the need for a convenient licensing procedure for visiting foreign amateur operators. We will, therefore, continue to explore other ways which the need can be met. In particular, we will work to ensure the reciprocal treatment of United States amateur operators -- whether through bilateral or multilateral arrangements."

(October 24, 1994 - Termination Order, PR Docket 97-167.)

The FCC has decided against adopting their proposal that would have permitted foreign amateur operators to become quickly licensed to operate on the ham bands during short visits to the United States. At present there are two ways that non-citizens can be authorized to operate an amateur radio station in the U.S.

- (1.) By passing the necessary examinations for a ten-year term license, or;
- (2.) Receiving a one-year operating permit issued on the basis of a reciprocal agreement which recognizes the amateur license issued by their own country.

In PR Docket 92-167, the FCC proposed a third way:

(3.) Volunteer Examiners would administer a short (20 question multiple choice) examination on the unique rules governing the U.S. amateur service and issue a certification which would permit a single 60 day period of operation.

The question pool for the new Element 5 would consist of the amateur service regulations questions from all existing question pools. The FCC would accept the foreign amateur's license as evidence of technical and operational competence.

The Commission said that while "...the comments did not dispute the need for an expeditious procedure" they did raise practical and other problems in connection with such authorization." Some commenters were concerned that "...language barriers may pose a problem for VEs in verifying the foreign license."

The ARRL said that "...VEs should not be issuing U.S. license documents with no participation on the

part of the Commission in determining operator qualifications at all." The FCC said that the VEs would merely be issuing the CSCE certification and that operating authority would come from the rule which authorizes the amateur station of the visiting foreign amateur operator to transmit.

Other commenters were concerned that authorizing operation by visitors from countries that do not currently have reciprocal agreements with the United States might reduce the incentive for those countries to enter into such agreements.

The FCC added "The ARRL believes that the best way to satisfy to need for a convenient licensing procedure is to establish an international system for reciprocal licensing and suggests the International Drivers License as a model."

Stephen R. Hutchins KN6G, an Extra Class amateur stationed in Germany, petitioned the FCC to allow amateurs whose license convey conditions authorized by the *Conference of European Postal and Telecommunications (CEPT)* administrations to operate in the United States. It was assigned RM-7680.

The FCC said that "Mutual recognition of the licenses of CEPT member countries and non-member countries may be considered at some future date. Such recognition requires coordination with the Department of State as well as international negotiations."

In view of the comments, the FCC decided not to go forth with their temporary visiting foreign amateur proposal. The petition of Mr. Hutchins was also dismissed "...while we pursue such international negotiations..." (MO&O - Released: November 2, 1994)

FCC ANNOUNCES MAXIMUM 1995 MAXIMUM REIMBURSEMENT FEE FOR AN AMATEUR EXAMS

The Commission announced on October 31st, that effective January 1, 1995, the maximum allowable reimbursement fee for an amateur operator license examination will be \$5.92. This amount is based upon a 2.96% increase in the Department of Labor Consumer Price Index between Sept. 1993 and Sept. 1994.

Volunteer examiners (VEs) and volunteer-examiner coordinators (VECs) may charge examinees for out-of-pocket expenses incurred in preparing, processing, administering or coordinating examinations for amateur operator licenses. The amount of any such reimbursement fee from any one examinee for any one examination session, regardless of the number of elements administered, must not exceed the maximum allowable fee. Where the VEs and the VEC both desire reimbursement, they jointly decide upon a fair distribution of the fee. Both the W5YI-VEC and ARRL-VEC will be charging a \$5.90 test fee in 1995.

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SPECTRUM SHARED BY AMATEURS TO BE SOLD!

The FCC has issued a press release on their *Notice of Proposed Rule Making* that looks toward converting a large block of spectrum from the Federal Government arsenal to commercial use. While not welcome news for the amateur community, it really comes as no surprise. The spectrum shift has been in the works for some time now and we have reported on it on numerous occasions. Hardest hit is AMSAT, who had planned to use part of the 2400 MHz band for their upcoming Phase 3-D satellite operations.

The simple fact, however, is that all amateur spectrum above 2-meters (except 222-225 MHz) is shared with other services. Before it is all over, some 200 MHz of spectrum will be auctioned off to the highest bidder and used for new, emerging telecommunications services.

The Commission has proposed a general allocation to the Fixed and Mobile services of 50 megahertz of spectrum identified by the Department of Commerce for transfer to private sector use. The FCC said in the news release "...the proposed allocations will benefit the public by providing for the introduction of new services or the enhancement of existing services."

"In compliance with the provisions of Title VI of the *Omnibus Budget Reconciliation Act of 1993* (the so-called Clinton deficit reduction plan), the Department of Commerce released a report on February 10, 1994, which made preliminary identification of 200 megahertz of spectrum for reallocation from Federal Government to private sector use, including 50 megahertz at 2390-2400 MHz, 2402-2417 MHz, and 4660-4685 MHz that would be immediately available."

The Reconciliation Act, signed into law by Pres. Clinton on August 10, 1993, requires the Commission to adopt rules by Feb. 10, 1995, to allocate the spectrum. The 2390-2450 MHz segment is currently available on a shared, non-interference basis to radio amateurs holding Technician and higher class licenses.

In the NPRM, the Commission stated that its principal objective when making spectrum allocation decisions is to ensure that the spectrum is put to its best use. The FCC proposed to achieve this goal by proposing a broad and general allocation to the Fixed and Mobile services for all three frequency bands.

"Such an approach," the Commission said, "would allow for flexible use of these bands so that licensees would be able to offer a wide range of services employing a variety of technologies."

The Commission asked for comments on this method ...and also on an appropriate licensing structure. The licenses will be made available through competitive bidding. (That is, peddled at auction to the highest bidder.)

The Commission also proposed "...to allow technical flexibility" (channelization, signal strength, modulation techniques and antenna characteristics) in providing service, "...consistent with not causing interference to other users."

As an alternative, however, to a general allocation to the Fixed and Mobile services, the Commission said that these bands might be allocated to specific communications services. Some of the uses suggested included "...an aeronautical audio/video service to provide real-time information and entertainment aboard aircraft, wireless local loop (telephone) service, broadcast auxiliary services to support advanced television, low-power communications, and continued use of some of this spectrum by the amateur community." The FCC asked for comment on this approach.

The reallocation does not necessarily mean that amateurs will lose access to 13-cm. At least one industrial firm, the In-Flight Phone Corporation, is on record as saying that "We believe that In-Flight Phone and the amateur community can become good neighbors in this band." (See Sept. 15th Report, page 4.)

(Notice of Proposed Rulemaking, ET Docket 94-32.)

CBS NEWS' WILLIAM LEONARD, W2SKE DEAD AT 78

CBS News' Bill Leonard, W2SKE whose career stretched from on-air news broadcaster to network news division chief died on October 23 in a Laurel, Maryland hospital of a stroke. He was 78 years old. He was first licensed as W1JHV some sixty years ago while a student at Dartmouth College.

Bill retired about a decade ago as President of CBS News where he was credited with beginning many innovative news concepts including the magazine-format programs "60 Minutes" and "Sunday Morning" ...and the development of the on-air broadcast prediction of election results. It was Leonard who made the decision to have Dan Rather replace Walter Cronkite as anchor of the "CBS Evening News."

Before becoming an executive, Leonard anchored the CBS radio program "This is New York" which later became "Eye on New York" on WCBS-TV. He originally came to CBS News as a floor reporter during the 1952 national presidential conventions. Mr. Leonard later produced and reported for the documentary series "CBS Reports."

In 1979, Leonard was named Executive Vice President and CEO of the news division. Later that year, he succeeded Richard Salant as president of CBS News. He retired three years later at age 66. During his four decade career at CBS, he constantly provided favorable publicity for amateur radio and amateur satellites. He is survived by his wife, Norma and six sons.

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DSP-93: The TAPR/AMSAT Joint DSP Program

Introduction

In July 1988, TAPR and AMSAT entered into the Joint DSP Program, in order to fund the development of an eventual DSP unit for amateur usage. During the summer of 1993, the direction of development was focused on a modular, stand-alone DSP system proposed by Bob Stricklin, N5BRG, in Dallas, Texas. The Stricklin DSP-93 design offered many of the things that the initial design goals of the project had specified. TAPR and AMSAT are currently taking orders on a periodic basis for units (see below). The DSP-93 is supplied as a complete kit (including enclosure and power supply).

For those not wanting to build a kit, there are preassembled DSP units on the market today. Ads for these units can be found in various publications. It is our hope that the TAPR/AMSAT joint DSP-93 project will expand the use of DSP in the amateur community and become a tool for education.

DSP-93 Design

The DSP-93 is designed to provide radio amateurs the wonderful capabilities of Digital Signal Processing in a stand-alone low-cost design. Not just limited to one mode, the DSP-93 can support data, audio, and video modes with the proper software.

DSP-93 has been designed in a modular fashion with two four-layer boards utilizing an interconnecting bus structure. The basic system includes a DSP engine board and a radio/computer interface board. The DSP Engine, bottom board, contains the TMS320C25 DSP, 32K by 16 bits of program and data memory - upgradable to 64K, the clock circuitry (40-Mhz) and some programmable array logic for system I/O. The Radio/Computer Interface Board, top board, contains two eight pin female mini-DIN connectors for radio interfacing. Incoming radio signals pass through a voltage divider to establish the initial levels, then through an eight channel multiplex chip. The multiplex chip then feeds the single A/D input with either of the radio inputs or one of the six auxiliary inputs. The Texas Instruments TLC32044 Analog I/O chip is used, which samples and updates at a rate of up to 45K operations per second and includes aliasing filters. This board also communicates to your computer at speeds up to 19.2K baud using a serial connection.

The modular design of the DSP-93 allows for either of these boards to be replaced with future boards designed for any number of unique applications. It's sort of like adding a new application card to a PC without redesigning the complete PC. The block diagram shows how the DSP-93 is interfaced. (see pamphlet)

DSP-93 Software Suite

As of November 15th, 1994, the following software has been made available for the DSP-93: 1200 AFSK*, 300 AFSK*, 1200 PSK*, 9600 FSK terrestrial*, 9600 FSK full-duplex for satellite operations, audio filters*, APT (Automatic Picture Transmission modem), Digital Oscilloscope, HF modem* (RTTY, PCTOR, AMTOR), test routines*, and user interfaces for MS Windows and Macintosh. (* - indicates source is available for amateur non-commercial use.)

Software will be distributed on Internet, Amateur Satellites, and as part of the TAPR software library. The idea of software for the DSP-93 is to make it as easy as possible to get and upgrade software in the future. Since the DSP-93 is an open architecture, it is hoped that as more amateurs get their units, more software will be developed and distributed.

Code Development

A low cost shareware assembler, TASM TMS320-25 Assembler, is available for code development. To develop code for this board, you must have good reference material. You can find numerous books on DSP algorithms and developing DSP code. The manufacturer's data sheets and books for the complex chips will also be good reference material. All details needed to write DSP code will be supplied with the kit.

To make this project a bigger success, more people are needed who want to learn about developing DSP applications, networking, and converting from the real linear world to the digital world. Ideally, everyone taking the challenge will select a particular idea and become so focused in the application that they become the expert. Some of the areas for development might include: new modulation techniques, speech synthesis, filters, spectrum analyzers, and many more applications you will think of. If you choose to work on the hardware aspects of this project, the modular approach should allow you to convert to other DSP chips or Analog I/O chips or to add additional capability.

Ordering your Kit

The DSP-93 sells for \$430 as a complete kit, including enclosure and power supply. For those not wanting to build a kit, there are several preassembled DSP units on the market today. If you live in a country that does not use 110v 60Hz AC, the price is \$420, and the unit will ship without the 9V AC wall transformer. (Please specify this in your order).

TAPR kits can be complex depending on the kitting experience of each builder. We don't think you will have trouble with the DSP-93 kit, but it does require some knowledge and experience to successfully go from a kit to a finished, usable unit, depending on the mode of operations. For data radio applications (i.e. 9600 baud FSK), special modifications must be made to your radio for proper operation of the DSP-93. Unlike other TAPR kits in the past, only the interface to the radio and the serial cable to the computer (DB-9) will be the responsibility of the kit builder. All other parts will be in the kit ready for complete assembly.

Due to the cost of each unit, TAPR and AMSAT are unable to fund the total purchasing of inventory that may sit idle. Neither organization can sustain such an investment. To avoid this possibility, TAPR and AMSAT are requiring that kit purchasers provide VISA/MC information or checks/money orders with their purchases.

Orders are being taken until December 31st, 1994 for March 1995 shipment. Money for the kit purchase will be deposited on January 15th, 1995 to cover kitting costs, with kits being shipped beginning March 15th. Orders will be taken for 150 units. As of October 23rd, 50 orders have been placed.

In this way, the DSP-93 kit will be provided in the exact numbers required for the demand. Many of the parts in the DSP-93 are between 10-15+ weeks. DSP-93 kits will be provided in batches as the demand warrants doing kits.

Orders can be mailed to the TAPR address: 8987-309 E. Tanque Verde Rd #337, Tucson, Az, 85749-9399, call (817) 383-0000 (Office Hours: Tue-Fri, 9 am-12 noon, 3 pm-5 pm Central Time), or fax (817) 566-2544. If you have questions concerning the unit, please write or call TAPR for an information pamphlet. The pamphlet will also be made available via fax through the TAPR voice system.

Note to TAPR members

Since this is a joint project, this kit will not have a membership discount attached.

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- The Dayton Hamvention will be changing their convention dates starting in 1996. The "always on the last weekend in April" will now become the third weekend in May. The *Dayton Amateur Radio Association* announced last week that starting in 1996 the Hamvention will be three weeks later.

The new dates are: (for 1995 no change - April 28, 29 and 30) but for 1996: May 17, 18, and 19; ...for 1997: May 16, 17, and 18, ...and for 1998: May 15, 16, and 17.

- It is beginning to look like future ham radio activity aboard the Mir space station will be greatly curtailed ...or even non-existent! A top Russian official said six cosmonauts on the ageing Mir space station would have to ration electricity for several months after the craft's solar batteries were unexpectedly drained when a powerful piece of electrical equipment unexpectedly sprang to life last month. The accident shut down part of the station and discharged four of the six batteries.

Four new solar batteries cannot be installed on board Mir until the middle of next year. Until then the cosmonauts will have to ration electricity. Several experiments had to be postponed because of the lack of energy. It is not yet clear what had caused the malfunction.

The six cosmonauts on Mir included German Astronaut Ulf Merbold, who holds the ham call: DP3MIR. Although Ulf was able to make some 2-meter contacts - especially over Europe, the power supply problem aboard MIR greatly reduced his activity. Merbold has now returned to earth. [QSLs for DP3MIR go via the German (DARC) QSL Bureau.]

The problems were just the latest to affect the Mir station. In early September the station was almost abandoned when two attempts to dock a supply craft failed. A last-ditch manual effort saved the day.

International expeditions to Mir have pumped much-needed cash into Russia's space program which is in a deep trouble because of under-funding. The European Space Agency paid Russia nearly \$60 million for the flight involving DP3MIR.

Mir is due to play a key role in an international plan to build a \$30 billion space station named Alpha. Russia has signed up with the European,

Japanese and Canadian space agencies as partners with the United States to build the station.

Russian involvement would require up to 10 U.S. shuttle flights to Mir for training and a higher orbit for Alpha to make it accessible to Russian launches. Work on the 200-ton six-man Alpha space laboratory, which will consist of several modules, should start in 1997 and be finished by 2001.

- Members of the AMSAT Phase 3-D International Satellite Design Team met in Marburg, Germany October 12th to 23rd, 1994. Dr. Karl Meinzer, DJ4ZC, AMSAT-DL President, the Phase 3-D Project Team Leader, and Werner Haas, DJ5KQ, AMSAT-DL Vice-President hosted the series of detailed meetings which included a "top-to-bottom" review of progress on all the satellite's systems and sub-systems. During the discussions, team members also bench-tested a number of flight hardware electronic items, and set the final operating frequencies for the spacecraft's transmitters and receivers. (These will be announced later.)

"It was a marathon session," said Dick Jansson, WD4FAB, AMSAT North America's Vice President for Engineering, upon his return to the United States on October 24th from the Marburg meetings. Dick went on to note that, as a result of the session, team members are now very confident that all key elements of the project are on schedule and that the spacecraft's integration in Florida can continue without interruption.

Several critical schedule milestones were achieved during the meetings. Among them were completion of all the formal documentation accompanying AMSAT's "Application to Use Ariane" (DUA) along with the necessary Safety Submission. Together, these documents constitute the formal, written request to The European Space Agency (ESA) regarding how AMSAT proposes to safely mount Phase 3-D on the Ariane 5. It took several members a number of days to complete this highly complex task. In addition, an ESA representative visited with the team in Marburg during the session to discuss details of Phase 3-D's interface to the Ariane 5.

All agreed that the project schedule timing is "tight". However, in closing, Dr. Meinzer expressed his sat-

isfaction with the progress to date, and was confident that the time allotted for all remaining critical activities in the project schedule appear both realistic and achievable.

- We are seeing a number of postings to various bulletin boards, e-mail and on-line services about possible or needed changes to the various amateur radio license classes. Actually all are critical of current Morse code requirements in one way or another.

One posting mentions a Code-only (no phone) amateur radio license which would allow access to 1.8-2.0, 3.525-3.750, 7.025-7.150, 10.100-10.150, 14.025-14.150, 18.068-18.110, 21.025-21.200, 24.890-24.930, and 28.0-28.3 MHz. Only a 5 wpm code test would be required - no written exam. (The VE would, however, provide the applicant with a packet of needed information.)

The purpose of this class is supposedly to offer another entry path into ham radio. In reality, it is a method to allow amateurs with 5-wpm proficiency to access all of the HF bands.

Another posting mentions the importance of eliminating the 13 and 20 wpm code requirements which discriminate against senior citizens aged 65 and older since "...their faculties are diminished."

Still another write-up talks about an amateur industry proposal to reduce the General Class code speed from 13 to 10 wpm "...since the current code requirements act as a barrier to hams who would otherwise populate the HF bands. Code learners frequently experience a 'plateau of learning' around 10 words-per-minute. They quickly progress up to that speed and then stall out, ...unable to make further progress no matter how intensely they continue to practice."

According to the posting, "Slow code" (the name given to the proposal) has gained far more support than criticism in ham radio circles."

Although this proposal was indeed discussed at least at two closed door meetings of the ARIG (Amateur Radio Industry Group), no petition for such a move has been filed. And as far as we know, none is planned.

These postings and their associated comments point to a widespread dissatisfaction with the Morse code knowledge that is required to access the HF bands.

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- At their 1994 National Convention in El Paso, Texas, the Quarter Century Wireless Association (QCWA) bestowed their coveted "DISTINGUISHED SERVICE AWARD" upon Kenneth M. Miller, K6IR of Rockville, Maryland.

The recognition honored the QCWA Life Member "...for his engineering accomplishments and his leadership of the Radio Club of America Scholarship Program."

Mr. Miller is also a Director and Chairman of the "Grants in Aid Committee" of the world's first radio communications society. The Radio Club of America, Inc., was founded 85 years ago in 1909 (five years before the American Radio Relay League) and is headquartered in New York City with over 1,200 members worldwide.

His committee oversees and administers a scholarship assistance fund with a pool of capital exceeding \$100,000. The fund is employed to assist worthy college students in need of financial assistance to pursue their education goals in the field of radio communications.

Ken Miller's professional career spans over four decades in the executive management and development of products in the electronic equipment manufacturing business segments of industry in the United States, Europe and Asia.

In his role as an executive with Lear Jet, Motorola, American Standard, the Singer Company ...and others - he has participated in the development, production and marketing of a broad array of high technology electronic products. These include airborne and ground-based communication and navigation instruments for the commercial and defense aviation industries; digital communication devices including computers and modems; scientific measuring instruments; and consumer electronic products including home and automotive based AM/FM radios, tape recorders and high fidelity speaker systems.

QCWA was founded forty years ago in 1947 "For the promotion of communication and experimentation, for the establishment and the advancement of the radio art and of the public welfare." All of its members were first licensed as amateur radio operators twenty-five or more years ago. QCWA is headquartered in Eugene, OR. - Tel. 503/683-0987

- The FCC has adopted a new rule that explicitly provides that all documents are considered filed with the Commission upon receipt at the location designated by the FCC.

There are a number of rules establishing deadlines for various actions. Some rules explicitly state when a document is deemed to be filed, while others do not. It has been consistent Commission practice to consider documents filed when the document is received at the location designated by the Commission, not on the date it might be postmarked. Adoption of a rule specifically stating this policy will avoid any potential uncertainty. (*FCC News Release*)

- Interesting item in the (London, England) Royal Naval Amateur Radio Society Newsletter, Summer 1994. "As from July this year, Morse training has ceased for radio operators in the surface fleet and will cease for submariners from 1996. This is due entirely to the demise of Royal Navy and commercial CW activity.

"All CW distress requirements (500 kHz) will be supported through [satellite-based] GMDSS. Flashing light (at 8 wpm) is still being taught."

- The *International Amateur Radio Network* headed up by Glenn Baxter K1MAN of Belgrade Lakes, Maine, is distributing a printed position document entitled:

STATEMENT OF FACTS

- W1AW information bulletins are legal.
- K1MAN information bulletins are legal.
- Good amateur operating practice requires that information bulletins follow a regular and published schedule.
- Part 97.103(b) is not inconsistent with scheduled amateur information bulletins.
- It is legal for any licensed amateur station to schedule and transmit amateur information bulletins.
- Intentional interference to any radio transmission, including to amateur information bulletins, is a felony under the 1934 Communications Act, Section 333, and is punishable with up to two years in federal prison under Section 501.
- Incidental interference to existing radio communications by a sched-

uled amateur information bulletin service is not a violation of Section 333, any rule of the Federal Communications Commission, or any existing international communications law.

On the back of the *Statement of Facts* policy letter is a copy of a 1989 letter sent by the FCC's Private Radio Bureau to an amateur who complained that "K1MAN interferes with [his] communications by transmitting recorded one-way communications."

The FCC responded by saying "We are familiar with the nature of the transmissions by K1MAN and find that they fall in the same category as the information bulletins transmitted by amateur station W1AW... Amateur service information bulletins are authorized by Section 97.111(b)..."

- The IARU position is that telegraphy knowledge by amateur radio operators is important for HF operation.

A note on page 48 of the (Nov. 1994) *Canadian Amateur Radio Magazine* says that the IARU position on Morse code for amateur operation below 30 MHz is that the *International Amateur Radio Union* will neither propose nor support a change in this requirement at this time.

A page 3 article in the (Nov. 1994) "Break-In" - journal of the *New Zealand Amateur Radio Transmitters* - also confirms that at "...WRC-95, it is the policy of IARU to not seek change to the Radio Regulations."

The IARU position is based on an Administrative Council decision in Singapore on Sept. 10-12, 1994. A resolution was adopted at that meeting recognizing "...that the Morse Code provides a means of intercommunication between peoples without regard to language barriers..." and that "...support of this requirement has been affirmed at the most recent conferences of each of the three IARU regional organizations."

- Spectrum Guide Lets Engineers, Developers, ...Entrepreneurs Tour the Information Skyway. Ever wonder where the various radio services are located in the radio spectrum? Telecommunications consultant Benn Cobb, KC5CW has authored an excellent reference book entitled *Spectrum Guide: Radio Frequency Allocations in the United States, 30 MHz to*

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300 GHz. The 312-page guide profiles major commercial, government and scientific uses of the U.S. spectrum in the 325 officially-designated VHF through EHF bands. It is available for \$34.95 from Publication Services, Inc., 8870 Business Park Drive, Austin, Texas 78759. The toll free orderline is 1-800-460-0090.

- **Catching crooks on 13-cm ham band!** One group pushing hard for a piece of 2400-MHz spectrum that is being turned over to the private sector is APCO, the *Association of Public Safety Communications Officials International, Inc.* The nation's law enforcement agencies say they need wide band spectrum to transmit "mug shots" (photographic images) and fingerprints to their patrol cars.

A picture takes up 100 times more bandwidth than a 200 word description. APCO is concerned that criminals with fraudulent driver's ID cards often clear the NCIC (National Crime Information Center) data base. They want the driver's photograph flashed to their dashboard video screen.

- **You can expect a more deregulatory era to emerge now that the Republicans control both houses of Congress.** Remember that the FCC answers only to Congress ...and not the president. No longer will politicians and bureaucrats be eager to jump on the administration bandwagon. There will be more disagreement everywhere.

An interesting sidenote is two days after the election, the FCC Commissioners passed a cable (increased) pricing plan by a very rare split vote. It was the first in the two years that Clinton has been president! Coincidental? Maybe.

The FCC's two Republican appointees (Andrew Barrett and Rachelle Chong) refused to side with the balance of the Democrat chaired commission.

- **Pizza over ham radio, pizza over cable TV ...now its pizza over the computer?** Electronic storefronts are popping up on the Internet! Nearly seven percent of the nation (some 20 million people) now have access to the World Wide Web. That is a very big market. This week's issue of Fortune magazine says that 700 businesses (including Pizza Hut) are on the net and looking towards selling online.

- **Even the White House is providing**

photographic tours complete with "downloadable audio greetings from Bill Clinton and Al Gore. "Welcome to the White House: an Interactive Citizen's Handbook" also contains the e-mail address of public (including FCC) officials so citizens can easily correspond back and forth with the government ...even the president. The administration has given a PC to every bureaucrat to play with. The White House's Web address is:

<HTTP://WWW.WHITELHOUSE.GOV>

We would be interested in learning if you get a timely (or any) response from the government. Give the service a try and let us know! In theory, this is a great idea - but how does it work in practice? My guess is that it doesn't.

- **Another Internet project, CommerceNet has only been in existence six months and already 60 firms are online.** Companies will be using the new service in stages. First a company establishes an Internet presence, then they take orders ...eventually they take payments online. Six working groups are working on developing the system.

- **Will business suits come with cheap pocket phones built in?** The "big sale" is scheduled for early next month. That's when the FCC begins auctioning off spectrum for PCS ...personal communications services. The ninety-nine broadband licenses to be sold in each of 51 MTAs (metropolitan trading areas) are expected to raise some \$10 billion for the U.S. treasury.

The sale begins Dec. 5th. The ante (which must be paid by Nov. 18th) is 60 cents per person, per license just to step up to the playing table. Seventy-four companies that have already signalled their intent to bid have to cough up millions *up-front* just to play!

Although some cable operators have signed up to participate, it appears that the (supposedly) "cheap" cellular telephone service will be primarily offered by existing cellular providers.

What effect will PCS have on the current cellular marketplace? Cellular companies now pay about \$500 for each new customer to dealers who use the money to cover telephone hardware, sales costs ...and, of course, profit. How will PCS be sold? It certainly seems that everyone will have to have a "cheap" phone if billions are going to be paid just for the spectrum

alone. The whole thing is mind-boggling. Stay tuned.

- **"Baby Bell" Nynex Corp., granted a trial earlier this year of Video Dial Tone technology, got more than they bargained for!** (See related story on next page.) VDT allows telephone companies to transport video - but they can not originate or dictate programming. It seems that some of red-faced Nynex's video-on-demand turned out to be "hard R-rated" adult porno flicks which can not be locked out.

- **A casino in every home!** Another new "video sin" for the regulators and "do-gooders" to worry about is video gaming - otherwise known as "Telegambling." The cable TV industry may be able to do what state legislatures have not been able to. That is to bring casino and sports book betting closer to the masses ...real close - like in your living room.

Legal gambling is a \$40 billion business ...and that represents only ten percent of the estimated "take." Telegambling is really not a new technology ...merely the marriage of video games, sports programming and electronic fund transfer. Basically, all living room gamblers will have to do is "play" and watch money flow out of their bank account. Your television set could become a slot machine ..or video poker!

Inside stuff. Be on the lookout for the new IWN (pronounced "I-WIN") Network. With it, you will be able to watch a horse race and bet interactively. And another competitor on the drawing board is called the "ODS System" which reportedly can handle pari-mutuel bets in 20 seconds right from your home.

There are six states now where telephone betting is legal ...and legislation in several others is pending. There is no law that says you can't set up an account in an area where gambling is legal (such as Nevada) and withdraw from it.

- **Downloading movies and network talk shows through to your PC are also on the horizon?** HBO has reached an agreement with Prodigy that makes the online service the first to offer full motion video downloading.

CBS also will offer computer video over Prodigy. And talk show hosts will migrate to two-way "video chat" technology. It is all being tested right now!

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PHONE COMPANIES AND CABLE TV TO COMPETE FCC video dialtone unites video and telephone

"The Commission expects video dialtone to increase competition in the video marketplace, which will foster lower prices, improve service quality, stimulate innovation, increase consumer choice among diverse programming sources and provide another opportunity for programmers to reach the market." From FCC news release issued Oct. 20, 1994.

"...competitive markets -- rather than heavily regulated, monopolistic ones -- best serve the public interest... Video dialtone is one piece of the regulatory puzzle that will facilitate the development of an advanced national information infrastructure. Such a sophisticated network of information and communications networks will bind us together as a people and enrich our everyday lives. ...The Information Age is about to deliver some dazzling new services and products to us all." FCC Commissioner Rachelle Chong

Cable TV operators universally believe the rug has been pulled from underneath them. And maybe it has! By unanimous vote, the FCC has issued a very complicated ruling which permits telephone companies to compete with cable television operators in the video marketplace under a truckload of regulations. The final text of the Order is expected to be issued shortly.

The words "video dialtone" is actually only a figure of speech to describe various video services in which programmers, rather than the phone company, own the shows. There is no "dial tone" nor is a special video screen needed in the home.

The decision, which was outlined in a 6-page press release, provides for telcos furnishing VDT (video dial-tone) service with sufficient capacity on their basic telephone platform to serve multiple video programmers on a common carrier nondiscriminatory basis. So-called preferential "anchor tenants" won't be allowed. VDT operators also do not have to obtain municipal franchises nor pay annual franchise fees since they are common carriers and not cable providers.

But it is a two-way street. Congress is also considering permitting cable companies to offer local and long distance telephone service. Long term, the effect of these proceedings could be massive! The line between cable and telephone will become blurred.

Basically the new VDT decision allows cable operators to own both their networks and programming while telephone companies may own and operate only the video network portion. They may not provide video service directly to their own telephone customers nor own more than 5% in any video programmer. (Telcos may, however, lease "drop wires" from cable operators on a limited basis within its service area.) This means the telephone wire coming into your home may now be used to carry video -- providing prior FCC approval of individual VDT networks and rates are obtained.

Although the new rules require separate accounting, cable operators are concerned ("furious" is a

much better word) that deep-pocketed telcos will unfairly load their costs on the voice portion of their business to keep video rates low ...and undercut their pricing. In a nutshell, they are understandably troubled about losing the video market share that their monopoly status provides.

Actually, "maximizing market share" appears to be exactly what the telcos have in mind. And the FCC is on record as saying "...there is nothing inherently nefarious in such a strategy." The Commission says they will, however, be watchful of anti-competitive pricing through the tariff review process.

"In America's free market economy, businesses daily make market entry pricing decisions like this as a matter of normal business strategy. ...The Commission will examine with care tariff filings by telephone companies proposing to offer video dialtone ...and will address unreasonably low rates." In addition, the FCC has directed their common carrier bureau to closely monitor the implementation of VDT services. In any event, cable TV rates seem certain to plummet. "Competition" is normally good news for the consumer.

Cable television operators typically face no local competition from alternative multichannel video programming distributors. While cable TV rates are subject to regulation when there is no effective local competition, FCC believes that "competition" rather than "regulation" is a better way to oversee cable TV.

What this means in simple terms is that two industries, "cable TV" and "telephone," have the potential to merge into a single - and very competitive - "telecommunications" service. Industry is already moving toward deploying broadband, integrated networks capable of transmitting voice, video and data over a single hair-thin fiber optic cable. It seems only logical that regulations permit widespread competitive utilization.

Congress and the FCC are already looking into more changes which will impact how telephone common carriers and cable operators do business in the future. It seems certain that both will ultimately participate in the other's business. As a general rule, the telephone industry favors the VDT decision and cable operators do not. Telcos believe that regulatory barriers to broad band network use must be eliminated if they are going to invest billions in its construction.

Southwestern Bell is now in the process of testing a "broadband DOS" VDT trial network system similar to the operating system used in personal computers. The end-to-end (video server-to TV set box) software will be supplied by Bill Gates & Company (Microsoft.)

Initial applications will include video-on-demand, an electronic program guide, a user navigation system and a "network operator channel" which will allow users to subscribe and be billed for new VDT services. Researchers say that by the year 2000, VDT and video-on-demand revenues could reach \$1.3 billion.